 --18. The recording material for back printing according to claim 2, wherein the ink receiving layer comprises silica, a polyester resin or a phenoxy resin, isocyanate, MEK, and cyclohexanone.--

--19. The recording material for back printing according to claim 2, wherein the proportion of the binder to the filler is 5-200 parts by weight of the binder resin per 100 parts by weight of the filler.--

REMARKS

Claims 1-19 are pending. By this Amendment, the specification is amended, claim 1 is amended and claims 8-19 are added. No new matter is added.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

I. §103 Rejection Over Sato in view of Shaw-Klein

Claims 1-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,560,982 to Sato (Sato) in view of U.S. Patent No. 6,110,585 to Shaw-Klein (Shaw-Klein). Applicants respectfully traverse the rejection.

Claim 1 is directed to a recording material for back printing, comprising a transparent substrate, a crosslinked ink absorbing layer, and a crosslinked porous ink transmitting layer, wherein the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer. Neither Sato nor Shaw-Klein, alone or in combination, teach a recording material having a crosslinked porous ink transmitting layer that is crosslinked to a greater extent than a crosslinked ink absorbing layer.

Sato discloses an ink jet recording sheet having a base and an ink receiving layer formed on the base, in which the ink receiving layer is formed of an ink solvent fixation layer formed on the base and an ink dyestuff fixation layer formed on the ink solvent fixation layer. See the Abstract of Sato. Sato does not teach or suggest a cross-linked porous ink

transmitting layer, does not teach or suggest a crosslinked ink absorbing layer, and therefore cannot teach or suggest the claimed relationship between the two layers.

Shaw-Klein discloses an ink jet recording element comprising a support having the following layers: (a) a layer having a cationic mordant for an anionic dye, (b) a non-ionic or amphoteric material compatible with (a) and (c), (c) colloidal silica, and (d) a hydrophilic overcoat. See the Abstract of Shaw-Klein. Shaw-Klein discloses that crosslinkers may be added to the layers. See col. 3, lines 53-55 of Shaw-Klein. The Office Action indicates that Sato and Shaw-Klein are analogous art and that it would have been obvious to combine Shaw-Klein's disclosure of a crosslinker with Sato's recording sheet. Applicants do not agree with the Office Action's assertion.

Nonetheless, neither Sato nor Shaw-Klein, alone or in combination, teach or suggest a recording material in which both the ink transmitting layer is crosslinked and the ink absorbing layer is crosslinked, and in which the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer.

For at least these reasons, Applicants submit that Sato, alone or in view of Shaw-Klein, does not teach or suggest every feature of claim 1. Accordingly, claim 1 is patentable over the cited references, alone or in combination. Claims 2-7 depend from claim 1, and thus include all of its limitations. Accordingly, these dependent claims are patentable over the cited references, alone or in combination, for at least the same reasons as claim 1, in addition to their own features.

Reconsideration and withdrawal of the rejection are respectfully requested.

II. §102 Rejection over Iwamoto

Claims 1-7 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,139,940 to Iwamoto et al. (Iwamoto). Applicants respectfully traverse the rejection.

Claim 1 is discussed above. Iwamoto discloses an ink jet recording sheet having an ink absorbing layer on at least one surface of a substrate, and an ink impermeable layer comprising a hydrophobic resin on the surface of the ink absorbing layer. See the Abstract of Iwamoto. At col. 2, lines 33-36, Iwamoto discloses that the ink permeable layer may comprise crosslinking agents. At col. 3, lines 44-47, Iwamoto discloses that the ink absorbing layer may contain melamine formaldehyde resin as an additive. However, Iwamoto does not disclose a recording material having both a crosslinked ink absorbing layer and a crosslinked porous ink transmitting layer. Further, Iwamoto does not teach a recording material in which the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer.

For at least these reasons, Iwamoto does not teach every feature of claim 1. Accordingly, claim 1 is not anticipated by Iwamoto. Claims 2-7 depend from claim 1, and thus include all of its limitations. Accordingly, these dependent claims are not anticipated by Iwamoto for at least the same reasons as claim 1, in addition to their own features.

Reconsideration and withdrawal of the rejection are respectfully requested.

III. §103 Rejection Over Iwamoto in view of Hamada

Claims 1-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Iwamoto in view of U.S. Patent No. 6,177,181 to Hamada et al. (Hamada). Applicants respectfully traverse the rejection.

Claim 1 and Iwamoto are discussed above. Hamada fails to overcome the deficiencies of Iwamoto.

Hamada is cited for its disclosure at col. 15, lines 8-9, that a crosslinking agent may be added to an ink absorbing layer. However, Hamada does not teach or suggest a recording material in which both the ink absorbing layer is crosslinked and the ink transmitting layer is

crosslinked. Further, Hamada does not teach or suggest a recording material in which the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer.

For at least these reasons, Iwamoto, alone or in combination with Hamada, does not teach or suggest every feature of claim 1. Accordingly, claim 1 is patentable over Iwamoto, alone or in combination with Hamada. Claims 2-7 depend from claim 1, and thus include all of its limitations. Accordingly, these dependent claims are patentable over the cited references, alone or in combination, for at least the same reasons as claim 1, as well as for their own features.

Reconsideration and withdrawal of the rejection are respectfully requested.

IV. §103 Rejections Over Hasegawa in view of Hamada

Claims 1-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,027,131 to Hasegawa et al. (Hamada) in view of Hasegawa. Applicants respectfully traverse the rejection.

Claim 1 and Hamada are discussed above. Hasegawa does not teach or suggest a recording material comprising a crosslinked ink absorbing layer, a crosslinked porous ink transmitting layer, wherein the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer.

Hasegawa discloses a recording medium that includes an ink-transporting layer and an ink-retaining layer, where the ink-transporting layer comprises particles in a binder. As acknowledged in the Office Action, Hasegawa does not teach or suggest a crosslinked ink absorbing layer, and does not teach or suggest a crosslinked porous ink transmitting layer. Thus, Hasegawa cannot teach or suggest a recording material in which the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer. For at least the reasons discussed above, Hamada does not overcome the deficiencies of Hasegawa.

For at least these reasons, Hasegawa, alone or in combination with Hamada, does not teach or suggest every feature of claim 1. Accordingly, claim 1 is patentable over Hasegawa, alone or in combination with Hamada. Claims 2-7 depend from claim 1, and thus include all of its limitations. Accordingly, these dependent claims are patentable over the cited references, alone or in combination, for at least the same reasons as claim 1, as well as for their own features.

Reconsideration and withdrawal of the rejection are respectfully requested.

V. New Claim Amendments and New Claims

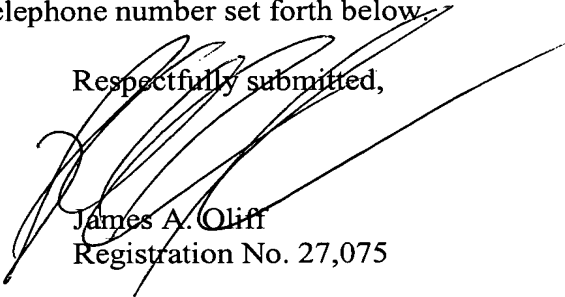
Support for the amendments to claim 1 can be found in the present specification, at least at page 7, line 24-page 8, line 3. Support for claims 8 and 9 can be found in the original claims. Support for claim 10 can be found in the present specification at least at page 6, lines 17-19. Support for claims 11-16 can be found in the present specification at least at page 5, lines 9-16. Support for claims 17-18 can be found in the present specification at least at pages 9-10, Tables 1 and 2. Support for claim 19 can be found in the present specification at least at page 4, lines 19-24. Each of these new claims ultimately depend on claim 1 and are therefore patentable for at least the reasons discussed above.

VI. Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Philip A. Caramanica, Jr.
Registration No. 51,528

JAO:PAC/amw

Attachment:
Appendix

Date: June 2, 2003

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Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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APPENDIX

Changes to Claims:

Claims 8-19 are added.

The following is a marked-up version of the amended claim 1:

1. (Twice Amended) A recording material for back printing, comprising:
a transparent substrate;
~~an~~ a crosslinked ink absorbing layer that is provided on the transparent substrate; and
a crosslinked porous ink transmitting layer, that includes a binder resin and a filler dispersed therein, is provided on the ink absorbing layer, ~~the binder resin including a hydrophobic resin,~~ wherein the ink transmitting layer is crosslinked to a greater extent than the ink absorbing layer.